

CLAIMS

1. A device comprising:
 - a first device to track sequential data order associated with a first execution unit;
 - a second device to track sequential data order associated with a second execution unit; and
 - a third device coupled to the first device and second device to track sequential data order of data stored in the first device and the second device.
2. The device of claim 1, wherein the first device is operable to notify the third device of mispredicted sequential data, and
 - wherein the first device is operable to flush a first set of sequential data.
3. The device of claim 2, wherein the third device to notify the second device of mispredicted sequential data, and
 - wherein the second device is operable to flush a second set of sequential data.
4. The device of claim 2, wherein the third device is operable to notify the first device of mispredicted sequential data, and
 - wherein the first device is operable to flush a third set of sequential data.
5. The device of claim 1, further comprising:
 - a fetch control unit to predict sequential data, fetch the sequential data and assign the sequential data to one of the first device and the second device during a flush operation.
6. A method comprising:

tracking the program order of a first set of instructions assigned to a first local reorder buffer in a first execution unit;

tracking the program order of a second set of instructions assigned to a second local reorder buffer in a second execution; and

tracking program order of the first set of instructions relative to the second set of instructions in a global reorder buffer.

7. The method of claim 6, further comprising:
notifying the global reorder buffer when a mispredicted instruction occurs;
initiating a flush operation in the global reorder buffer; and
notifying the first local reorder buffer of the mispredicted instruction.
8. The method of claim 7, further comprising:
notifying a fetch control unit of a mispredicted set of instructions.
9. The method of claim 6, further comprising:
sending a signal to the second local reorder buffer to flush at least a third set of instructions.
10. The method of claim 6, further comprising:
fetching a fourth set of instructions; and
assigning the fourth set of instruction to the first reorder buffer during a flushing operation.
11. The method of claim 6, further comprising:
retiring an instruction according to an indicator stored in the global reorder buffer.
12. A system comprising:
a bus;
a memory device coupled to the bus; and

a processor including a fetch control unit to fetch instructions from the memory device, a first execution unit to process one or more of the fetched instructions, a second execution unit to process one or more of the fetched instructions, a first reorder buffer to track instructions assigned to the first execution unit, a second reorder buffer to track instructions assigned to the second execution unit, and a global reorder buffer to track instruction order of instructions assigned to the first reorder buffer relative to the second reorder buffer.

13. The system of claim 12, wherein the first reorder buffer is operable to signal the global reorder buffer upon detection of a mispredicted instruction.

14. The system of claim 12, wherein the first reorder buffer is operable to flush a first set of instructions upon detection of a mispredicted instruction, and

wherein the fetch control unit assigns a second set of instructions to the first reorder buffer based on a set of load balancing criteria.

15. A machine readable medium having stored therein instructions, which when executed cause a machine to perform a set of operations comprising:

tracking the program order of a first set of instructions assigned to a first local tracking device in a first execution unit;

tracking the program order of a second set of instructions assigned to a second local tracking device in a second execution unit; and

tracking program order of the first set of instructions relative to the second set of instructions in a global tracking device.

16. The machine readable medium of claim 15, having further instructions stored therein which when executed cause a machine to perform a set of operations further comprising:

notifying the global tracking device when a mispredicted instruction occurs.

17. The machine readable medium of claim 16, having further instructions stored therein which when executed cause a machine to perform a set of operations further comprising:

tracking a first set of switch points in the global tracking device.

18. The machine readable medium of claim 16, having further instructions stored therein which when executed cause a machine to perform a set of operations further comprising:

flushing a second set of switch points based on the mispredicted instruction.

19. A apparatus comprising:

a means for tracking the program order of a first set of instructions assigned to a first local tracking device in a first execution unit;

a means for tracking the program order of a second set of instructions assigned to a second local tracking device in a second execution unit; and

a means for tracking program order of the first set of instructions relative to the second set of instructions in a global tracking device.

20. The apparatus of claim 19, further comprising:

a means for notifying the global tracking device when a mispredicted instruction occurs.

21. The apparatus of claim 19, further comprising:

a means for flushing at least a third set of instructions in the first local tracking device.